other computing device that can access the Internet. Furthermore, dedicated server 26 optionally provides additional information services, such as television listings, enhanced television services, video and graphics delivery, etc.

Figure 2 depicts selected elements of one embodiment of a client system that may be used to implements portions of the invention. Client system 10 uses hardware and computer-executable instructions for providing the user with a graphical user interface, by which the user can access Internet resources, send and receive e-mail, and optionally receive other information services. Operation of client system 10 is controlled by a central processing unit (CPU) 28, which is coupled to an application-specific integrated circuit (ASIC) 30. CPU 28 executes computer-executable instructions designed to implement features of client system 10, including some of the steps of methods of the present invention. ASIC 30 contains circuitry which is used to implement certain functions of client system 10. For example, ASIC 30 may be coupled to an audio digital-to-analog converter 32 and to a video encoder 34, which provide audio and video output, respectively, to display device 20 of Figure 1.

Client system 10 may further include an IR interface 36 for detecting infrared signals transmitted by a remote control input device, such as a hand-held device or a wireless keyboard. In response to the infrared signals, IR interface 36 provides corresponding electrical signals to ASIC 30. A standard telephone modem 38 and an ISDN modem 40 are coupled to ASIC 30 to provide connections to modem pool 12 and, via the Internet 18, to remote servers 16. While the client system illustrated in Figure 2 includes both a telephone modem and an ISDN modem, either one of these devices is sufficient to support the communications of the client system. Furthermore, in other embodiments, modems 38 and 40 may be supplemented or replaced with cable modem 42 or another suitable

Docket No. 14531.47.1

1 communications device. In other environments, communication may instead be established

2 using a token ring or Ethernet connection.

3 Also coupled to ASIC 30 are a mask read-only memory (ROM) 44, a flash memory

4 46, and a random access memory (RAM) 48. Mask ROM 44 is non-programmable and

5 provides storage of computer-executable instructions and data structures. Flash memory 46

6 may be a conventional flash memory device that can be programmed and erased

7 electronically. Flash memory 46 may store Internet browser software as well as data

8 structures. In one embodiment, a mass storage device 50 coupled to ASIC 30 is included in

9 client system 10. Mass storage device 50 may be used to supply computer-executable

10 instructions and data structures to other components of the client system or to receive data

11 downloaded over the network. Mass storage device 50 may include any suitable medium for

12 storing computer-executable instructions, such as magnetic disks, optical disks, and the like.

13 Application software and associated operating system software are stored in flash

14 memory 46, or instead may be stored in any other suitable memory device, such as mask

15 ROM 44 or mass storage device 50. The computer-executable instructions that, according to

16 one embodiment of the invention, are used to monitor television viewing habits of a user and

17 to construct a user profile that forms at least part of the basis for selecting advertisements are

18 executed by CPU 28. In particular, CPU 28 executes sequences of instructions contained in

19 one or more of mask ROM 44, flash memory 46, and RAM 48 to perform certain steps of

20 the present invention that will be more specifically disclosed hereinafter.

21 In one embodiment of the invention, client system 10 is a WebTV set-top box

22 manufactured by WebTV Networks, Inc. of Mountain View, California. In this case,

23 dedicated server 26 of Figure 1 can be a WebTV server that provides Internet access and,

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optionally, additional content and information. Alternatively, however, client system 10

may be any of a variety of systems for receiving resources from a server.

Those skilled in the art will appreciate that the invention is not limited to the distributed computing environment and the client system illustrated in Figures 1 and 2. The invention may be practiced using other client system configurations, including personal computers, hand-held devices, multi-processor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, and the like. In distributed computing environments, program modules may be located in both local and remote memory storage devices. Moreover, the authorization of servers to provide network resources can be verified in local area networks and wide area networks in addition to the network depicted in Figure 1. For example, a smart card, a PCMCIA device, or another intelligent peripheral can be used with the client to verify that the server is authorized to provide network resources according to an alternative embodiment.

Figure 3 illustrates selected functional features of one embodiment of a system that includes a client system and a server system. Client system 10 communicates with a network infrastructure 52 via a conventional network interface 54, which may be any of the modems or other communications devices described above in reference to Figure 2. Network infrastructure 52 may be the network architecture illustrated in Figure 1. Client system 10 includes a system enabler module 56 that controls the availability of some or all of the non-essential features of client system 10. "Non-essential features", as used herein, can include all of the features of client system 10 other than the basic functions that permit the client system to verify the identity of server 60. For example, when all of the non-essential features of client system 10 are disabled, the client system may still be capable of being turned on and accessing server 60 sufficiently to determine whether the server is